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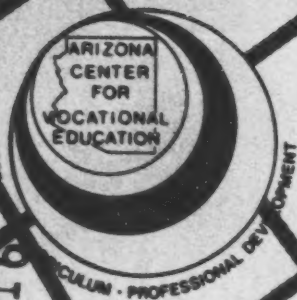
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ABSTRACT

This publication reports a study of business/education partnerships that have evolved in Arizona. Chapter 1 is a brief introduction. Chapter 2 discusses related literature concerning incentives and disincentives for business and educational involvement. Chapter 3 presents descriptions of model partnership projects--nine high school, seven community college, and two joint high school/community college. Each description provides this information: program area, partnership purpose, organizational structure, sponsors, contact, overview, implementation, success factors, and benefits. Chapter 4 describes the study design, which consisted of two elements: (1) an educator survey to identify partnerships between vocational education and the community and to provide insights into partnership formation and maintenance; and (2) a business survey to compare perceptions of the private sector with those of the public sector for factors contributing to the partnerships. Chapter 5 reports these findings: (1) informal organizations have been more often used; (2) another form of collaboration uses existing organizational structures; (3) important factors in initiating partnerships were an established rapport and communication between business and school and provision of mutual benefits; (4) five factors to maintain partnerships were identified; and (5) administrative support was required. Appendixes include a sample survey, contacts for technical assistance, and an annotated listing of practical guides to collaboration. (YLB)

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Arizona's Blueprints for Building Partnerships

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**ARIZONA'S BLUEPRINTS
FOR
BUILDING PARTNERSHIPS**

by

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Flagstaff, Arizona 86011

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CHAPTER 1

INTRODUCTION

Vocational Educators have found it difficult to keep pace with changes in technology; the types and nature of jobs are significantly different from a decade ago. The shift from manufacturing and industrial jobs to service and high technology jobs has required the services of workers capable of learning and adapting to new jobs throughout a work life. According to a recent Chamber of Commerce report, "...current and future employees will be called upon to continually update and retool job skills through training, retraining and education" (1984, p. 6).

To meet this challenge requires a significant commitment of physical resources and personnel time from both the business and education communities. However, wasteful duplication of resources need not occur in the process. Rather, collaboration between community organizations can result in sharing of resources for education and training, maximizing the potential impact for all participants in the collaborative effort. Cetron (1984, p. 30) proposes a new vision for occupational preparation as follows:

Operating training programs in vocational, technical, and industrial facilities twenty-four hours a day will eliminate much of the need for duplicating expensive equipment. For example, computers can be purchased by the high school vocational education department, using Job Training Partnership Act funds. They can be used from 4:00 p.m. to midnight to train unemployed workers, from 8:00 a.m. to 4:00 p.m. to train high school vocational education students, and from midnight to 8:00 a.m. to train industrial factory workers.

This vision of collaboration has begun in Arizona and the nation; individuals from the private and public sectors have come together to form cooperative educational programs. The following is a study of a number of those partnerships, the processes used for implementing them and the benefits that have been derived from the relationships.

The Purpose of the Study

The major purposes of the study were: 1) to determine the types of vocational partnerships in existence in Arizona; 2) to define the processes used to establish and maintain the partnerships; and 3) to examine the benefits gained by the student, the teacher, the business/agency, and the school or college. The study was conducted to provide direction for individuals wishing to establish or expand participation in partnerships. Model vocational education partnerships in the state of Arizona have been highlighted and the names of resource organizations in and out of the state provided.

Literature relating to this subject is discussed in the next chapter. The model projects are presented in Chapter 3, and the study design and findings are described in Chapters 4 and 5 respectively.

CHAPTER 2

RELATED LITERATURE

President Reagan's National Task Force for Private Sector Initiatives and the passage of the Job Training Partnership Act of July 1983 are small reminders to vocational educators and the business community that collaboration is a desired goal at the national level and could soon be a mandatory provision of future vocational education acts. Willard Wirtz, former United States Secretary of Labor, in The Boundless Resource (1975, p. v), calls for the institutions of education and work to be brought together, "...not so much in any particular programs as in developing truly 'collaborative processes'."

"Collaboration" in the sense being used today goes far beyond the cooperative efforts of the past. "Under a fully collaborative arrangement, business and industry would not just advise and assist vocational educators; they would join in providing training, share in authority for what is done, and be held equally responsible for the outcomes" (Moss, 1984, p. 71). In Moss' view the concept "...implies a more continuous integration of effort toward common purposes with shared authority and responsibility. It describes a partnership rather than simply a supportive relationship" (1984, p. 71).

There are many reasons for increased interest in collaboration by both business and education leaders. A national concern for excellence in education, expressed by a series of recent prominent reports, has direct bearing on the rush for partnerships between business and education sectors. Implicit in the reports is a concern of the times: increasing international competition threatens the economic well-being of the United States, "demanding that educational institutions be more responsive to national and international economic trends" (Chamber of Commerce of the United States, 1984, p. 6).

The most evident of those trends has been the rapid changes occurring in the nature of jobs. Technology has moved the nation from an industrial society to an information society. The impact upon the business community and individual workers has been swift and dramatic. Structural unemployment has left whole industries obsolete, and has left tens of thousands of "displaced workers" to flounder. Industries that survived, recognized in advance the responsibility and burden of meeting the rapid changes in technology. Training, retraining and upgrading for work were needed on an on-going basis. The concept of "lifelong learning" required a rethinking about the kind of individual who could make these adaptations throughout their work life, and the type of education necessary to produce employees capable of making these changes.

The Economics of Change

In reaction to the evolving nature of events, both education and business have found it necessary to make structural changes within their organizations. Each has sought the resources to respond and found them in short supply. The nation has grown weary of throwing more money at education in the hope of dramatic results. As federal cutbacks in education have become a reality, educators have been asked to do more with less.

The business community, facing their own economic and training crisis, has sought collaborative efforts to accomplish their goals. The result has been that both the business and the education communities have awakened to the economic benefits possible through resource sharing. As collaboration or a sharing of resources occur, mutual benefits accrue for all.

Incentives for Business Involvement

What are the forces, both intrinsic and extrinsic that cause business, industry, and agencies to collaborate with education? Most certainly a driving force, from a business perspective, has been the increased financial burden of training needed to keep abreast of current industry trends. This burden, while acute for large firms, has been more keenly felt by smaller firms, who have found as personnel have been upgraded, they left for more lucrative jobs with larger firms.

Then, too, training has become more critical to companies as machinery has become more costly and technical. Cecil Groves, in "Using the Community as a Resource" states: "Unskilled and untrained workers operating expensive equipment in today's technology era could result in tremendous financial losses, damages, accidents, and downtime" (1984, p. 174).

Industry experts view collaboration with vocational education as a means to reduce turnover and assist with turnover-related costs. Peter J. Elliman, an industrialist, elaborates, "Every time my company loses an employee and hires another it costs the company ten thousand dollars. This figure represents the estimated average industrial cost for worker turnover" (1983, p. 3). The cost to replace technicians and managers is significantly higher.

Young companies are also in great need of the resources available to them through partnership sharing with education. A Brookings Institution Study cited by Clinton (1984, p.47) indicates, "Fifty percent of the jobs between 1974 and 1980 were created by brand new companies without the resources to carry out internal training programs." Access to instructors and curriculum the companies could not otherwise provide is an incentive for involvement.

While the profit motive allows business to perpetuate itself, it does not provide the personal or corporate satisfaction that comes with community involvement. The intrinsic rewards that business people find through efforts to improve educational systems cannot be measured solely on the profit side of a balance sheet. Business people enjoy the personal satisfaction of being part of an educational team that resolves community concerns for education and employment. In addition they find self-satisfaction in success stories of individuals they have assisted toward a productive work life.

To ensure a continuous supply of well trained employees, more and more business and industry leaders throughout the nation are seeking ways of using tax dollars wisely through the formation of partnerships with education. Duplication of facilities, equipment and educator/trainers can no longer be afforded or tolerated.

Incentives for Educational Involvement

Education has much to gain from involvement with industry. The list of benefits or possible kinds of assistance are only limited by the imagination. The greatest benefit derives when businesses become advocates of vocational education. This is only possible if potential employers of the educational product (students) have an integral part in decisions about education and training.

Collaboration serves as a means of communication with the larger community for the college or school. Willard Wirtz, cited by Clinton (1975, p. 48), states schools can become "...isolated from the rest of the country...from the resources for enriching and extending the educational process, and from the reserve of goodwill potentially existing for furthering educator's objectives...."

Potential Benefits

Partnership processes provide opportunities for understanding and action. Following are some benefits education may derive from business, industry or agencies through collaboration (Atlanta Public Schools Adopt-a-School, 1984):

The expertise of skilled and professional persons for

- * classroom instruction
- * industry-based instruction
- * industry sponsored programs
- * demonstrations or presentations in-plant or in-class
- * consulting, to identify training needs, personnel qualifications, facility and equipment needs, and curriculum updating

Youth employment opportunities for

- * summer jobs
- * co-op classes
- * internships

Exposure by students to business practices or career exploration through

- * work experience
- * one day/one week visitations or shadowing on-site
- * tours
- * involvement in career days or career seminars

Access to current industry equipment and facilities through

- * on-site training
- * industry loans or donations
- * industry sponsored programs on the school campus

Student activity sponsors for

- * student organizations
- * judging of events
- * travel
- * awards

Professional staff development assistance in the form of

- * business/education job exchanges
- * summer employment opportunities for high school or community college teachers in industry
- * business evaluations of instructional content and techniques as they relate to skills to be mastered

Assistance with goods, services and supplies through

- * technical assistance to teachers in purchasing
- * donations of time or goods
- * shared production of products or services either on campus or in the industry.

Outright grants of financial aid.

Disincentives for Involvement

While several barriers to collaboration were noted in the literature, none appeared insurmountable. Miscommunication was viewed as the greatest deterrent (Johnson, 1984). Jasso (1984) says collaboration fails because of several "misses"; "...mistrust, misunderstanding..." and so forth. While institutions of education and work have developed separately and tended to remain separate, Jasso points out problems can be avoided if both sides approach each other "with the clear commitment to the belief that working together will be far more beneficial to all concerned than working separately" (1984, p. 81).

Mistrust and the other misunderstandings can usually be eliminated through the establishment of positive communications mechanisms and by delineating clear roles for those who wish involvement in collaboration. For instance, if both educators and business partners understand that the educators will have the final determination for the educational processes, and business and industry the final say about the competencies required, each will feel more comfortable and accepting of decisions.

The communication process requires that the two groups be willing to give up something, such as a little control. Vocational educators have long been seen by business people as either wanting to do something "for business" or wanting something "from business." This forces each side into a situation of diminishing control over some aspects of education and training but provides greater control over other aspects. As the benefits of collaboration are understood by all parties, each will be more willing to give up some control over decisions and directions in order to obtain the shared gains possible through working together.

Partnerships Take Shape

The partnership movement in education has taken many shapes and forms. Organizations have responded to the idea with new publications offering guides for partnership creation or simply to report, for possible replication purposes, those partnerships in existence. Some of the organizations mentioned as national leaders in promoting collaboration between education, business, and other community organizations are: 1) The California Business Roundtable, 2) President Reagan's National Task Force for Private Sector Initiatives, 3) The National Association for Industry-Education Cooperation, 4) The Conference Board, and 5) The Atlanta Partnership of Business and Education, Inc..

While large national organizations have stimulated interest in collaboration between education and other sectors of the community, not all partnerships originated from these types of organizations. The majority of the partnerships reported in the literature appear to have been initiated from one-to-one contact between individuals in a given community as local educational and training issues were addressed.

Summary of the Literature

The nation and the world economy are changing dramatically. As the communities of business and education are called upon to provide direction for meeting training, retraining and education requirements of a technological society, each has sought means of addressing new issues and trends.

Business, industry, and agency officials have become increasingly aware of the incentives for involvement with education. Their desire for a well-educated and well-trained work force have been motives for initiating and participating in partnerships with education.

Educators have come to realize that isolation does not provide them with access to new ideas nor does it provide needed community support. New understandings are possible when educators are willing to work cooperatively with businesses, industries and agencies. The concrete benefits to be gained from collaboration are limitless, and include human, physical, and financial resources.

In summary, the institutions of work and education have developed separately and have tended to remain separate. Successful collaborative models have opened the door to new understandings and new possibilities for addressing education and training issues. Now is the time, using these guides, both from an economic and a nationalistic view, for private and public sectors to be brought even closer together to resolve the educational and training issues of the day.

CHAPTER 3
HIGH SCHOOL
PARTNERSHIPS

PROGRAM AREA: AGRICULTURE, RESOURCE MANAGEMENT

Partnership Purpose: Curriculum/Program Revitalization and Community Service

Organizational Structure: Advisory Council

Sponsors: Payson School District and Payson Ranger District, Tonto National Forest

Contacts: Wendell Stevens, Instructor, Payson School District, and Jeannette Kaiser, Sig Palm, and Keith Menasco, Forest Service

Partnership Overview

The Vocational Agriculture Department of Payson High School collaborated with the Payson Ranger District to upgrade the curriculum, provide work experience in land management, and perform community service projects. Personnel from the Ranger District assisted in identifying the jobs and competencies within departments of the Forest Service. The high school instructor taught the theory. The Forest Service demonstrated the application of specific competencies, e.g. compass and map reading, through in-class sessions and weekly contact with students in the field. Equipment, materials, and use of the natural land laboratory were provided by the Forest Service.

Community service projects were identified jointly by the school and Forest Service to provide students of Resource Management a wide range of skills while supplying the Forest Service with manpower they could no longer afford due to budgetary cutbacks. Critical thinking and management skills were stressed as students conducted needs assessments; analyzed wildlife habitat, natural vegetation and soil erosion factors; and applied principles of multiple use management. Skills were also developed in pump house construction, trail maintenance, and restoration of a meadow damaged by unauthorized recreational activities.

Implementation

The teacher, in an effort to provide actual experiences, first sought to develop a simulated land laboratory for student learning. When this was not possible due to 98% federal ownership of the county land, he established a working relationship with the Ranger District. As ideas flourished, it became apparent that each could benefit from a cooperative venture. Ranger District personnel were asked to serve on an advisory committee to the school program. The committee functioned in a partnership role, with plans, goals, and implementation features that were mutually agreed upon and mutually beneficial to both the school and the Forest Service.

Success Factors

1. The teacher identified an abundance of human and physical resources in his community and established the organizational structure through which all partners would work.
2. Roles for the advisory committee were established (it was not to be a political power group).
3. A progression of activities that would not be overwhelming was planned by the teacher for the advisory group.
4. The suggestions and talents of the advisory group were used.

Benefits

1. The exposure of students to the various disciplines within the Forest Service helped develop their career planning options. They became sensitive to environmental issues addressed by the Forest Service.
2. The school, due to the cooperation, has not duplicated community resources (the land laboratory) and has gained valuable hours of instructional and advisory time from forest experts. As the restored meadow will always be available, the school has a continuous, changing, teaching project.
3. The Ranger District gained manpower to accomplish tasks not permissible with budget cutbacks. The meadow restoration project had greater chance for success with student and community involvement.
4. The community as a whole benefited from a trail for hikers that is continuously maintained and from a pump house that affects approximately 100,000 people per year.

PROGRAM AREA: SUMMER YOUTH EMPLOYMENT

Partnership Purpose: Summer Jobs

Organizational Structure: Informal and Community Organization

Sponsors: Patagonia Union High School District, Arizona Department of Education, Job Training Partnership Act, and the town of Patagonia

Contacts: Joseph M. Landavazo, Superintendent, and Jesus Kataura, Director, Santa Cruz County Job Training Partnership Act

Partnership Overview

Patagonia is a small rural town with few summer job opportunities. There were many repairs, building projects, etc., in the town that required attention, but no money was available for these efforts. Senior citizens in town were in need of assistance with home repair and upkeep.

Employment for students to perform these community services was secured with the aid of several agencies. The Arizona Department of Education (ADE) funded a coordinator/supervisor for a summer job program. This individual coordinated program activities that occurred in three sites, the elementary school, the high school, and the town of Patagonia. Job Training Partnership Act (JTPA) funded job slots for the students; the town of Patagonia employed a high school teacher to supervise students working in the town; the high school district coordinated operation of the program and supplied additional supervision and materials; and the Senior Citizens Club, on a bi-weekly basis, identified senior citizens who were unable to do their own work and the tasks needed to be accomplished for them.

The high school supplemented required JTPA job related skills workshops by providing additional programs in first aid and safety. Each of the twenty-five summer job participants selected per year completed Red Cross certification requirements for CPR and First Aid.

Implementation

Following are implementation features: 1) the superintendent wrote and submitted proposals to both JTPA and ADE, 2) funding was secured and a coordinator selected who planned job responsibilities and work schedules, and 3) an in-depth orientation session was held involving students, the Senior Citizens Club, agency contacts, and supervisors to establish lines of responsibility and accountability.

Success Factors

1. School administrators assisted supervisors with supervision to ensure students performed well and demonstrated initiative. When supervision was lacking, bad habits and attitudes were learned.
2. A cooperative working relationship was formed between the town officials, the school, and state government officials to identify and attack a community problem.

Benefits

1. Students learned job related skills not otherwise possible in their small community, while earning income.
2. Students and seniors established working relationships and communication.
3. The town, senior citizens, and the schools have benefited from working together to solve community problems.

PROGRAM AREA: HEALTH OCCUPATIONS

Partnership Purpose: Work Experience and Curriculum/Program Revitalization

Organizational Structure: Advisory Committee

Sponsors: Paradise Valley School District, Humana Hospital, and Chauncey Arabians of Scottsdale

Contacts: Sue Morrison, Coordinator and Instructor, Paradise Valley School District; Ken Levin, Executive Director, Humana Hospital, Desert Valley; and Dr. Khris Kirkland, Resident Veterinarian, Chauncey Arabians.

Partnership Overview

Utilizing an advisory committee structure, the District Coordinator/Instructor was able to develop community support for a vocational program in an urban community. Disciplines covered were: 1) Health Care Assistant, 2) Medical Assistant, 3) Phlebotomist (one who draws blood), 4) Equine Veterinarian Assistant, 5) Emergency Medical Technician, and 6) Physical Therapy Assistant. Through partnerships with health providers, students were provided access to health science laboratories and the latest equipment and techniques in a work experience program. While not paid for their school related laboratory experience, many students were concurrently employed by the training sponsors in the evening hours.

Success Factors

1. Meetings were scheduled during the day at the major clinical facility, as evenings proved too tiring. Having long and frequent meetings was not advised.
2. Advisory members identified tasks to be completed and were actively involved in their implementation.
3. Roles and purposes of the advisory group were defined through the development of bylaws and a constitution.
4. Adequate communications to all levels of staff within the training facilities were carefully built, e.g. to alleviate fears of employees who felt volunteer student labor could be job threatening. To create understanding, one-to-one contact by the director was continuous.

Benefits

1. In addition to job skills, students experienced success, learned the value of a team effort, and received tremendous support from the professionals with whom they worked.
2. The school had permanent loan of equipment, visibility in the region, and students who would enter the community as professionals and paraprofessionals.
3. The students formed a competent health care resource for health providers. Publicity efforts rewarding the participation of the business community was extensive and included banquets, certificates from the students, and reviews by the media.

PROGRAM AREA: BUSINESS EDUCATION AND MARKETING AND DISTRIBUTIVE EDUCATION

Partnership Purpose: Co-op Education

Organizational Structure: Formal

Sponsors: Tucson Unified School District, Tucson Adopt-a-School, Cholla High School, Arizona Bank, and Home Federal Savings and Loan

Contact: Jo Ann Zirkle, Adopt-a-School Facilitator, School-Community Services Office, Tucson Unified School District

Project Overview

The Adopt-a-School concept provides for linking of schools with "adopting" businesses for support and enrichment of the educational process. While inclusive of, it is not necessarily limited to, vocational education.

The Cholla High School partnership with Arizona Bank and Home Federal Savings provided assistance to two cooperative education programs, Marketing and Distributive Education and Business Education. The financial institutions interviewed three students per opening for paid clerical/teller positions with their branches and departments. Students selected for employment were trained on-the-job. Evaluation occurred on the 90th and 180th day of the program that operated September through May. Pay increases were awarded accordingly.

Each spring, the two banking businesses assisted in a one-day-per-week, seven week presentation on careers in finance. Employees from various departments including marketing, data processing, and public relations offered students the business-person's views on business concepts, career opportunities, office skill requirements, and corporate communications.

Implementation

The concept of the Adopt-a-School partnership was researched and reviewed by the school district. Major businesses were identified and approached by the superintendent to determine those interested in forming a partnership. A presentation was then made during a regularly scheduled annual meeting with local business leaders. At that time, committed businesses spoke on behalf of the merits of the program. Once schools and businesses were paired, an orientation meeting of all partners ensured each knew their role.

Success Factors

1. Business calls to solicit support for the partnership idea were initiated by peer contacts of the business people.
2. As personnel changes are on-going in both businesses and schools, constant updating was critical. Continuous contact between the partners was made possible with the staffing of a facilitator whose employment was proportional to program size.
3. Commitment of on-site administrators ensured provisions were made for teacher release time, transportation of students, and followup.

Benefits

1. Students learned while they earned.
2. Teachers had opportunities to interact with business people and gain the support from those other than the professional peer group. They were able to observe similarities and differences between the work environment of education and of the partners.
3. Built into the relationship were several side benefits for participating businesses: a) the opportunity to develop a more informed body of consumers, b) increased morale, c) an opportunity to affect educational programs that result in better employees, and d) positive public relations.

PROGRAM AREA: TRADE AND INDUSTRIAL EDUCATION, COMMERCIAL FOODS

Partnership Purpose: New Program Development

Organizational Structure: Advisory Council

Sponsor: Mesa Central Vocational Technical Center and the Food Industry

Contact: Mary Ann Griffith, Department Chair, Mesa Central Vocational Technical Center

Partnership Overview

According to Arizona Department of Economic Security data, Arizona's top ranked industry is the hospitality industry. Food preparation and service comprise the greatest reported demand for jobs within the industry, yet few high school programs had been developed to address this need. It was the desire of the administration of Mesa Central Vocational Technical Center (Mesa Vo-tech) to provide vocational programs in areas with high market demand for entry level employees.

To this end, an advisory committee was selected for the new program area of Commercial Foods Trades at Mesa Vo-tech. It was comprised of a wide range of representatives from the food service industry. The purpose of the group was to provide guidance to program sponsors on technology trends, facility design, and equipment purchases. The advisory group has served a partnership role. It has provided scholarships to future catering executives, donated state-of-the-art equipment, and given critical advice and service to the program. In exchange for participation, the industry has gained well trained, knowledgeable employees.

Implementation

A telephone survey of major food production operators was conducted to ascertain if the food program being proposed would be an asset to industry. The response was overwhelmingly positive. Those persons so responding were asked to serve in an advisory capacity to give guidance in the development of viable programming.

After operating out of an old school facility for a number of years, the program has moved into new facilities that include three dining areas. Each room represents its own unique restaurant environment and provides for learning of a variety of types of food preparation and service. Kitchen design includes equipment selected on the advice of the advisory group and in many instances donated by them or their business counterparts.

Success Factors

1. A survey of advisory committee members provided information on low or high interest areas for participation and involvement. The coordinator then gave members the opportunity to become actively involved according to their own interests, abilities, and time commitments.
2. The advisory committee generated most of their own ideas and activities, with the coordinator facilitating.
3. School administrators were willing to listen, were flexible, offered support, and allowed instructor mobility.

Benefits

1. Students and the school will benefit from the new facilities.
2. The teacher has the backing of industry, information on current industry trends, and organizational support for changes and upgrading. Program visibility has led to increased industry and public awareness.
3. Industry participants felt a sense of self-satisfaction about the success of the program as it evolved. Their efforts were rewarded with planned publicity events.

PROGRAM AREA: BUSINESS EDUCATION

Partnership Purpose: Work Experience

Organization Structure: Community Organization

Sponsors: San Manual High School/Rotary Club

Contact: Linda Cooper, Instructor, San Manual High School

Partnership Overview

Through the energies of the teacher, a linkage was established with businesses of a rural tri-community area, using the local Rotary Club as the vehicle. With few job opportunities for students of business education, the purpose of the project was to obtain practical work experience and on-the-job training. Students were released from their classes two consecutive weeks in the spring to work without pay for businesses all day in their home towns.

Business persons were placed in an instructional and planning role. They trained students on equipment the school did not possess, while teaching and evaluating job retention skills.

Implementation

To address the problem, the teacher initiated the following steps: 1) a work experience program was developed, 2) the proposal was presented to a few business people who later became enthusiastic supporters of the idea, 3) with the assistance of the business supporters, members of the Rotary Club were approached at a regularly scheduled meeting, and 4) the backing of a few members ensured the support of the club, whose members joined forces to secure work stations for the students.

Success Factors

1. Students were prepared so that they understood the value of the work experience to future job finding.
2. Students were screened carefully the first year for maturity, dependability, and likely success on the job.
3. Before the start of the work experience, other nonparticipating teachers were assured that class work missed would be completed by students.

Benefits

1. Students completing the program were able to indicate that they had job experience on applications for employment.
2. The students' presence throughout the town was a positive reflection on the school system.
3. Business gained a pool of trained workers for intermittent busy times, e.g. holidays, summers, and weekends. The visibility of the students was good advertising for the participating businesses as everyone in the community knew who was taking part. Also numerous articles were printed in local newspapers to publicize the school/business partnership.

PROGRAM AREA: TRADE AND INDUSTRIAL EDUCATION, DRAFTING, WELDING, WOODS

Partnership Purpose: Program Support

Organizational Structure: Advisory Committee and Community Organizations

Sponsor: Miami High School, and various clubs, businesses, and community organizations

Contact: David Montgomery, Chair Vocational Education, Miami High School

Partnership Overview

Students have participated in community service projects as an integral part of the vocational education program in Miami, Arizona. The plan arose from a school need to provide meaningful projects for vocational students at little or no cost to the students or the district. Community projects were selected each year from proposals submitted to the vocational advisory committee by several organizations. Selection criteria required the project to provide a variety of learning experiences for students in three subject areas; drafting, welding, and woods.

One example of total community involvement in these endeavors was the construction of moveable bleachers. The Globe Lyons Club paid for the steel; the lumber and bolts were donated by local hardware stores; drafting students designed the structure; the frames were cut and welded by the welding class; and the wood shop assembled, sanded, sealed, and finished the unit.

Implementation

The teacher formulated a plan of community involvement in school projects that would provide a service to the community, be of little expense to the school or individual students, and provide program support for vocational education. The proposal was presented to the vocational advisory group, an organization already in place and actively involved in program decisions. The advisory committee supported a concept that called for donations of materials and equipment to the school in exchange for finished products identified by community organizations for construction.

Success Factors

1. Community organizations were willing to incorporate the school's need for meaningful projects with their mission of service to their community.
2. Effective communication with donees resulted in a timely flow of donated goods which increased student production. Being specific about the materials needed eliminated donations that were not useable.

Benefits

1. Students, regardless of ability to pay, received the opportunity for guided learning in a production process.
2. As the products produced were useable and visible, the school has received recognition for its cooperative community linkages.
3. The community has benefited from the labor and products of students who finish one major project each year.

PROGRAM AREA: BUSINESS EDUCATION

Partnership Purpose: Curriculum/Program Revitalization

Organizational Structure: Formal

Sponsors: Amphitheater Public Schools and Businesses of Tucson, Arizona

Contacts: Katie Frey, Research Specialist and Melissa Franklin, Volunteer Coordinator for Amphitheater Public Schools; and Trish Spences, File Maintenance Clerk, Safeway Stores, Inc., Store #268

Partnership Overview

An interchange of resources and services occurs between Tucson, Arizona businesses and Amphitheater Public Schools through membership and participation in a formal organization; BEST (Business and Education Sharing Talents). The stated organizational purpose is "to enhance cooperative, mutually beneficial working relationships" between businesses and education.

Safeway Stores, Inc. has participated in a BEST project designed to provide students with earning experiences in business. The store provided retail sales equipment and a Safeway employee as an in-store trainer. In exchange for industry cooperation, Amphitheater Schools provided opportunities for the business to participate in a variety of workshops taught by Amphitheater educators. Workshop topics included sessions on time management, CPR, and stress management.

Implementation

Business education faculty of the Amphitheater school district requested equipment not within the financial capabilities of the district to provide. To address the problem, the faculty developed a plan to involve businesses in the schools. Inherent in the proposal was the concept of mutual benefits; if a business was expected to give time and expertise to education, education should be prepared to provide services in return. A draft of the BEST concept, which called for an exchange of resources between businesses and education, was presented to the superintendent, who gave support of the idea by selecting a program coordinator. Under the direction of the coordinator, potential business partners were identified and a brochure was developed which was oriented towards the potential business partners. After initial contact with each of the identified businesses, an invitation for breakfast was extended to the businesses to join the school in an organizational and informational kick-off of the partnership.

As BEST became operational, meetings between teachers and administrators, between teachers and business trainers, and between program organizers and top management from the businesses were held, agreements were made, and minutes recorded. Program organizers recognized the necessity for continual communication at all levels of the program operation.

Success Factors

1. When soliciting business for participation in the partnership, BEST stressed the reciprocal features of resource sharing which would benefit both business and education.
2. The school district developed a clearly defined program, presented the idea in a colorful brochure, and used individual one-on-one contact with businesses, followed by group solicitation.
3. Communication between and among all parties was adequate and was followed by written summaries of agreements and understandings.

Benefits

1. Students were exposed to the training and perspective of industry.
2. The school gained access to equipment it could not otherwise afford as well as educational opportunities for students within the business community.
3. Personnel of the participating businesses were provided the opportunity to participate in Amphitheater School District sponsored workshops.

PROGRAM AREA: AGRICULTURE, HORTICULTURE

Partnership Purpose: Curriculum/Program Revitalization

Organizational Structure: Informal, Business

Sponsors: Flowing Wells High School and B and H Growers

Contacts: Mike Henry, Instructor, Flowing Wells High School and David Bradshaw, Co-owner of B and H Growers

Partnership Overview

B and H Growers, a wholesale tree nursery of Tucson, initiated a partnership with the Flowing Wells Future Farmers of America (FFA). The business pays a monthly fee to FFA in exchange for daily care and upkeep of their entire tree inventory (4,000 trees). Students are involved in all phases of planning, financing, and ultimate decisions concerning the proper care of trees. The contract between FFA and B and H Growers has been in effect since January of 1984. Plans are to continue this outstanding competency building activity indefinitely.

Implementation

After formal discussions, administrative and school board concurrence was obtained before the item was brought before the FFA membership for approval. A legal contract was drawn and signed by both parties.

Success Factors

1. Actual business profit/loss incentives were present for both parties.
2. Administration was informed of any changes or problems that occurred.

Benefits

1. Students gained an acceptable knowledge of irrigation, fertilization, pruning, and weed control. They were involved in all phases of planning, financing, and decisions concerning proper care of the trees, which enabled them to enter retail/wholesale nursery employment immediately upon graduation.
2. The school had a continuous resource lab at no cost.
3. B and H Growers was assured quality care of their product, a central location of their inventory which was on school property, and excellent public relations.

* A similar exemplary vocational agriculture partnership was reported between Amphitheater School District and two businesses; Arizona Feeds and Greenworld Nursery. The partnership provided laboratory training for students in nursery management (including retail sales, inventory control, and marketing) and horticulture. The two corporations leased school land laboratory facilities for the program. For more information, contact Wayne Dotts, Associate Superintendent of Amphitheater School District; Donald R. Brush, President of Arizona Feeds of Tucson; or Gary Petterson of Greenworld Nursery, Phoenix.

MODEL
COMMUNITY COLLEGE
PARTNERSHIPS

PROGRAM AREA: TECHNICAL EDUCATION, ELECTRONICS

Partnership Purpose: Industry Education

Organizational Structure: Formal

Sponsors: Pima Community College, Tucson Consortium for Electronics Education, University of Arizona

Contacts: Carl R. Webb, Associate Dean/Registrar Community Campus of Pima Community College; Joe Engle, Director of Employee Development, Burr-Brown Corporation; and Linda Koss, Director, Personnel Department, Hughes Aircraft Company

Partnership Overview

Arizona has rapidly become a major manufacturing center for electronic and microelectronic industries. However, the development of human resources has not kept pace with industry growth. In order to meet the rapidly expanding labor needs of this industry, the Tucson Consortium for Electronic Education (TCEE) was formed during the spring of 1983 to address the following problem areas: 1) an inadequately skilled labor pool for the electronic/microelectronic industry, 2) the potential growth and demand for skilled labor within this industry, 3) a rapid obsolescence of skills and a continuing need for retraining of personnel within the industry.

The TCEE consists of the Burr-Brown Corporation, IBM, Hughes Aircraft Company, National Semiconductor, AiResearch Electronic Systems Division, and TEC, Inc. TCEE utilizes the Burr-Brown Education Center for its educational activities. This center is provided by Burr-Brown for programs being conducted by Pima Community College, the University of Arizona, TCEE, and Burr-Brown's internal educational program. Some of the programs being offered or to be offered by the TCEE in conjunction with Pima Community College include: 1) electronics assembly, 2) wafer processing, 3) solder training, 4) inspection, 5) electronic assembly process technician, 6) wafer processing technician, 7) electronic technician, 8) electronic technician, analog, 9) electronic technician, digital, 10) equipment maintenance technician, 11) electrical engineering for transfer, 12) computer science (basic), and 13) computer science (for the electronic industry).

Implementation

The Tucson Consortium for Electronics Education originated at the community level under the leadership of Joe Engle, Educational Development Officer for Burr-Brown Corporation, in conjunction with educational officers of other companies.

Carl Webb of Pima Community College was invited to serve as executive director of the consortium because a significant portion of the educational effort at the companies was provided by the college. The University of Arizona and area proprietary schools also participated with the Consortium.

Success Factors

1. The leadership role was assumed by the business community.
2. For this type of cooperative effort to work, active support from top level management in both education and business was necessary.
3. The Consortium was interested in reducing training costs and new hire turnover in a rapidly changing industry.

4. The community college system was flexible; program offerings were provided with very short notice and, in places, appropriate for the business community.

Benefits

1. Employees benefited from technical training at their work-site at a considerable savings in cost.
2. Most of the instructors in the project were and are employed by the companies on a full-time basis and work for Pima Community College on a part-time basis. As a result of working with the educational community, the instructors gained expertise in education and training.
3. The college system acquired a cost effective means of meeting educational obligations to the local community, and at the same time provided faculty access to continuous professional upgrading with knowledge and skills current to industry.
4. The participating companies were provided less expensive internally-generated training. Access to degree programs for employees provided an attractive feature for employee up-grade programs and a common denominator for industry-wide training.

PROGRAM AREA: TECHNICAL EDUCATION, MACHINE SCIENCE TECHNOLOGY

Partnership Purpose: Industry Training

Organizational Structure: Informal

Sponsors: Cochise College and Inland Motor Speciality Products Division

Contacts: Dr. Tullar, Vice President-Provost and Mr. Allen Walker, Division Chair, Aviation, Cooperative Education, Technology, Sierra Vista Campus, Cochise College, and Mr. Ken Irwin, Vice President and General Manager, Inland Motor

Partnership Overview

An Arizona industry has planned and constructed space specifically dedicated to educational needs in a unique partnership. Cochise College and a high-technology electrical motor company, Inland Motor, have developed in-plant training to address the industry's demand for trained employees in precision machine science. College officials in rural Cochise County persuaded the industry to construct 2,000 square feet of shop space specifically dedicated to the training. Inland Motor donated \$29,000 worth of hardware to provide the nucleus for the training effort and supplied all electricity. Utilizing company buying power to procure industry-current equipment such as lathes, mills, and grinders, the college was able to realize a \$19,000 savings in their purchases. The college conducts the training which is competency-based and directly linked to industry and apprenticeship standards.

Implementation

Inland Motor, a high-tech aerospace industry, was undergoing expansion when the college approached them with a plan to include space for training and upgrading of workers in the new addition to the company production plant. The idea would solve the industry's shortage of trained personnel in precision machine science, at the same time provide the college with the resources to implement an expensive training program.

Through the cooperation of the Arizona Department of Education, a vocational education grant was secured by Cochise College for \$25,000. The amount received matched the institution's commitment, providing a total of \$50,000 "seed money" to begin the machinist training.

Success Factors

1. Top administrators in industry and in education were committed to the success of the partnership.
2. Responsibilities for each partner were clearly established.
3. Planning steps were agreed upon jointly by the partners as the program evolved.
4. The college exhibited an interest in supporting the needs of the industry.

Benefits

1. Students benefited from greater availability of high-technology programs in a rural community.
2. The college was able to provide an otherwise prohibitively expensive program, which would not have been possible without the partnership.
3. Inland Motor gained access to a workforce locally trained in precision machine science.

PROGRAM AREA: TECHNICAL EDUCATION, COSMETOLOGY

Partnership Purpose: Industry Training

Organizational Structure: Informal

Sponsors: Eastern Arizona College and the Safford College of Beauty Culture

Contacts: Dorine Chancellor, Associate Dean of Vocational Education, Eastern Arizona College and Mrs. Freddie Pittman, Owner, Safford Beauty College

Partnership Overview

Eastern Arizona College and the Safford College of Beauty Culture have joined in a contractual partnership to provide training in four certified programs: Cosmetology, Manicurist, Cosmetology Instructor, and Manicurist Instructor. Two Associate of Applied Science degree programs, Cosmetology and Cosmetology/Small Business are included in the partnership agreement. The courses are offered on an open-entry, open-exit basis. The industry provides equipment and facilities to the partnership; the community college provides educational resources and financial aid to students in the form of grants and loans.

Implementation

Faculty and administration originated a concept of collaboration that provided benefits to both business and education. The beauty college was an old institution with twenty-five years of experience and a reputation for quality training. Through cooperation with the community college, students of the cosmetology program received financial aid, which in turn provided access to education for more students and boosted enrollments. The community college, by virtue of the partnership, could offer new certificate and degree programs. Working cooperatively, both parties finalized course outlines and the contract.

Success Factors

1. High interest and commitment to the partnership contributed to satisfactory contractual agreements which were mutually beneficial to both partners and clearly delineated financial and educational responsibilities.
2. Administration demonstrated leadership in the support of the concept, committing time to establish and publicize the partnership.

Benefits

1. Students wishing to enroll in cosmetology had access to financial aid in the form of grants and loans.
2. The college added a vocational program without investment in or duplication of costly education equipment.
3. The industry gained an enlarged prospective student community.

PROGRAM AREA: TECHNICAL EDUCATION, ELECTRONICS

Partnership Purpose: Industry Training

Organizational Structure: Informal

Sponsors: Mohave Community College and Ford Arizona Proving Ground

Contacts: Hal Byfield, Dean of Vocational Technical Education, Mohave Community College and Hal Clemet, Manager, Ford Arizona Proving Ground

Partnership Overview

Cooperation between Mohave Community College (MCC) and Ford Arizona Proving Ground provided the mechanism for industry related training and upgrading in electronics, applied math, and management. Portable buildings used for instructional purposes were provided by the college, but were located on the industry site. The industry partnership training concept of the college, while serving existing businesses in the area, also served the local community's economic development efforts, acting as an incentive for business relocation to the community.

A dual instructional process was established with teachers of the industry and the college. Instructors from the industry were selected for their expertise in the area to be taught. MCC also provided an instructor at the industry site ten hours per week. As new products and processes were developed by the Ford Motor Company, workshops were scheduled at the proving grounds. The MCC instructor and curriculum specialist attended these workshops which were taught by top level designers from Ford. Recommendations were then made by the MCC instructor to administrators of Ford Arizona Proving Ground on what and how to teach the new material to staff.

Implementation

Through joint discussions, the industry training needs were determined. Options for the training were offered to the industry by the college; no recommendations were made. Mohave Community College created a business climate: educational services were to be profitable to participating businesses. The college also provided versatility: services were to be developed quickly, with high quality and to the complete satisfaction of the industry.

Success Factors

1. The administration of the college was committed to community service and industrial development.
2. Instructors were industry oriented.
3. The training processes and communications were on-going and could therefore change day to day to meet the conditions of the moment.

Benefits

1. Employees benefited from upgrading of job related skills. Other students had a high probability of job placement with the industry as training was designed specifically for high demand jobs identified by the industry.
2. The tax paying community benefited directly from the educational product, which enhanced the image of the college.

3. The industry gained access to educational expertise in the design of training materials and instructional processes, and at the same time minimized training costs.

4. The industry training provided by the college was used as a community economic development promotional device. New industries were encouraged to locate in the area and avail themselves of opportunities for collaborative training.

PROGRAM AREA: TECHNICAL EDUCATION, LIBRARY TECHNICIAN

Partnership Purpose: Curriculum/Program Revitalization

Organizational Structure: Advisory Committee

Sponsors: Mesa Community College, Mesa Public Library, and other participating libraries

Contacts: Jeanette Daane, Educational Services Librarian, Mesa Community College and Herschel V. Anderson, Director, Mesa Public Library

Partnership Overview

Through an agency/education partnership, Mesa Public Library, a member of Online Computer Library Center (OCLC), provided affiliate membership to Mesa Community College (MCC). The arrangement allowed students in the Library Technician program to receive training in library automation on campus. The OCLC system offers a data base containing over 10 million bibliographic records, with growth at the rate of 23,000 per week. Through this data base, libraries can share resources (library material and expertise). Industry standards for employment made it vital for students in the library technician program to have experience using this service.

Access to the training provided MCC with curriculum that was updated to current library techniques. At the same time a service was provided to Mesa Public Library and other public libraries in the region who desired OCLC training for their personnel (one third of their employees need training in this field). The college had utilized Mesa Public Library staff and equipment for the training in prior years.

Implementation

To produce employable library technicians, the MCC curriculum required updating and revitalization based upon current industry techniques. A cooperative venture to train technicians within the library setting resulted from demand expressed by the advisory committee, which was comprised of representatives of area libraries. To meet the challenge of devising a realistic librarian program, the college instructor received professional upgrading in the computer system.

Success Factors

1. The vocational education program at the college required placement of students. To achieve this goal, the college was receptive to changes in their curriculum.
2. The libraries needed a source of trained employees who met their educational standards for employment.

Benefits

1. Students learned up-to-date skills which made them more employable.
2. The college instructor received professional updating in knowledge and skills.
3. The college gained a viable educational program through cooperation with the libraries.
4. The industry gained a source of trained workers for the library computer system.

PROGRAM AREA: TECHNICAL EDUCATION, POWER PLANT CONSTRUCTION

Partnership Purpose: Industry Training

Organizational Structure: Informal

Sponsors: Northland Pioneer College and Brown and Root (Construction Company)

Contact: Dr. Arvin Palmer, Vice President of Northland Pioneer College

Partnership Overview

Brown and Root is a major non-union company known for construction of power plants. They had been awarded a contract by Tucson Electric to build a power generating station near Springerville, Arizona, in 1982. When moving into a new community, the philosophy of Brown and Root has been to utilize local labor and training systems. In this case, Northland Pioneer College (NPC) was approached with a two part request; to train people to assume entry level positions in the plant construction, and to develop a system for continuous training and upgrading of employees as construction progressed through each building phase.

Brown and Root provided all training facilities, part of the expense of training manuals, and all specialized equipment. Northland Pioneer College assumed all instructional costs and part of the costs of a training coordinator. In addition, NPC upgraded the curriculum to include measurable performance standards.

Implementation

After the industry training request was received, NPC and Brown and Root personnel met to determine the process for training and resources to be shared by each party. Brown and Root required construction of the highest quality. To meet this requirement, a rare two-year degree program in Power Plant Construction was developed by NPC. The company agreed to pay for all employees' tuition and texts. They also agreed to start participating employees as entry level laborers and, after completion of the program, promote them to higher level technicians. Masters and journey-level workers were selected by the partnership as instructors. As a result of the business/industry cooperation, savings to the Brown and Root training budget were substantial.

Success Factors

1. Northland Pioneer College had a commitment to economic development and training of local people.
2. Brown and Root had a need for trained personnel at all phases of their project, at the lowest possible cost.

Benefits

1. Employees could earn an Associate of Arts degree while working. They had a transcript to complement their letter of training recommendation.
2. Brown and Root had continuous upgrading of employees through each of the construction phases. They were able to significantly reduce their training budget over a two year period.
3. Northland Pioneer College was able to increase educational opportunities for their students at a reasonable cost to taxpayers and at the same time contributed significantly to the economic welfare of the citizenry.

PROGRAM AREA: TECHNICAL EDUCATION, LOG SKIDDERS AND TREE SAWYERS

Partnership Purpose: Industry Training

Organizational Structure: Informal

Sponsors: Northland Pioneer College, White Mountain Fort Apache Timber Company, Pinetop Logging, Bureau of Indian Affairs, and Job Training Partnership Act

Contact: Dr. Arvin Palmer, Vice President of Northland Pioneer College

Partnership Overview

Through the cooperative efforts of several organizations, training programs were offered to Native Americans as log skidders and tree sawyers. The training was initiated to meet the tribe's mandate to train and employ Native Americans, but the training also served a dual purpose in that there was a need for trained persons in the tribal owned business, Fort Apache Timber Company.

The Bureau of Indian Affairs (BIA) supplied timber to be used in training through the private timber reserves they monitor and control. They also furnished on-site staff to ensure proper management procedures in the field. Fort Apache Timber Company, a tribally owned business, supplied a Catapillar tractor and a log skidder. Pinetop Logging Company, a private contractor, established standards for the training and loaned saws. The White Mountain Apache Tribal Job Training Partnership Act (JTPA) program covered, to a limited extent, stipends and student costs. Northland Pioneer College (NPC) provided the instructor and the curriculum, the apparatus necessary for chainsaw maintenance, and the salary of the program director who was employed four months of the year. This partnership has operated four of five years in the spring of the year. The completion rate has been 75% with 100% of those fully employed.

Implementation

Officials of JTPA, Pinetop Logging, and the Fort Apache Timber Company identified a shortage of trained workers in logging. Assistance was sought from the community college in establishing the program. Together, all partnership sponsors outlined who would bear the responsibility for providing the various resources. The partners designed a curriculum which allowed cross training of individuals as either tree sawyers or log skidders, but provided for specialization where aptitude was shown. An instructor was hired, off season from industry, to conduct the training.

Success Factors

1. Each sponsor benefited from the training effort.
2. The costs of the training to each partner were kept to a minimum by resource sharing between them.

Benefits

1. The Native American students completing the training program had marketable skills to utilize throughout logging country.
2. Northland Pioneer College and JTPA met the economic and training concerns in their community. Through resource sharing, the cost of the program was manageable.
3. The participating industries had a steady source of trained personnel.

**MODEL
HIGH SCHOOL/COMMUNITY COLLEGE
PARTNERSHIPS**

PROGRAM AREA: VOCATIONAL EDUCATION

Partnership Purpose: Economic Development, Business/Industry Training

Organizational Structure: Formal

Sponsors: Yuma High School District, Arizona Western College, and Yuma Education and Business Alliance

Contacts: T.O. Beach, Director of Vocational Education, Yuma Schools; Ernest Lopez, Sr., Associate Dean of Career Education, Arizona Western College; Jack Nolan, Manager, First Interstate Bank and President, Yuma Education and Business Alliance.

Partnership Overview

Yuma Education and Business Alliance (YEBA) is a newly reorganized business/education partnership whose mission is to work collectively towards economic development and job training/upgrading. Four goals were envisioned by the membership: 1) to establish a business/educator exchange, 2) to develop an apprenticeship program with a goal of twenty initial participants, 3) to place teachers in appropriate business settings for sixty days each summer, and 4) to work towards the concept of an area vocational center that would serve both the high schools and the community college. Articulation between secondary and postsecondary programs has also resulted as an outgrowth of the organization. The group was in its first year of development.

Implementation

The renewal effort for YEBA came from the community. The "no-name group" met for the purpose of addressing educational and training needs as they pertained to economic development. Four major objectives of the organization were originated, taking into account community, industry, and educational needs and resources. A coordinator was selected from the high school district with the understanding his role was to be the facilitator for members who were expected to assume active leadership and decision-making roles.

Success Factors

1. Representation of the total community was sought, including large and small businesses, labor, industry, governmental agencies inclusive of the military, education, and the private sector.
2. The selection of a coordinator allowed one-to-one communication that was essential to understanding and goal completion of the partnership.

Benefits

1. As the organization was young, benefits were not yet measureable.

PROGRAM AREA: TECHNICAL AND INDUSTRIAL, MACHINE TRADES

Program Purpose: New Program Development

Organizational Structure: Community Organization

Sponsors: Deer Valley Unified District, Glendale Chamber of Commerce, Association of Northwest Phoenix Manufacturers, Glendale Community College, Gilbert Engineering Company, Inc.

Contacts: Owen W. Layton, Administrator of Career/Vocational Education, Deer Valley Schools and Dan Franklin, President, Glendale Chamber of Commerce and Vice President, Gilbert Engineering

Partnership Overview

Collaboration of numerous organizations has resulted in machine trades training, previously unavailable to industry and students in western Phoenix. Since classes were designed to be articulated, students could take the course for community college credit or for high school credit, which could be transferred to the community college. Deer Valley Unified School District provided the facility and equipment. Glendale Community College paid for the instructor who was a Gilbert Engineering employee. The Chamber of Commerce contacted all manufacturers with information on class startups; the Association of Manufacturers contacted individuals eligible for upgrading or retraining; and Gilbert Engineering supplied the curriculum and served as the conduit in the collection of scrap materials from the manufacturing community that were used in training.

Implementation

In his capacities as President of the Glendale Chamber of Commerce and Vice President of Gilbert Engineering, Dan Franklin communicated with other industrialists and educators in west Phoenix about the possibility of addressing the perceived shortage of trained workers and training offerings in machine trades. He initiated the structure for communication to be used by the partners, which was the Glendale Chamber of Commerce Education Committee.

A feasibility study, completed by Glendale Community College, established the need for machinist training in west Phoenix. Together, educators and business leaders developed a training and implementation plan to meet that need.

As instructors to teach such a program were not available in the educational institutions, a Gilbert Engineering employee became the first trainer. Gilbert Engineering later hired a Deer Valley School District machine trades instructor for a summer for the purpose of providing the instructor with knowledge and experience in current industrial practices.

Success Factors

1. A critical factor of success was administrative support in all participating organizations in terms of personnel, schedules, and budgets.
2. Membership and regular attendance in the Glendale Chamber of Commerce Education Committee facilitated organizational cohesiveness.

Benefits

1. Articulation agreements enabled students taking the machine trades program for high school credit to transfer up to twelve hours to Glendale Community College.
2. The high school gained industry-current training.
3. Small manufacturers in west Phoenix had access to training that would otherwise have had to be acquired in-house or sent out at much cost in lost production time.
4. Due to regular interaction with educators, the Gilbert Engineering instructor acquired improved teaching and communication skills, according to his supervisor.

CHAPTER 4

STUDY DESIGN

INSTRUMENTATION

Two open-ended questionnaires were developed with similar questions; one was targeted to educators, the other to businesses, industries, or agencies. The educator survey was designed to identify partnerships between vocational education and the community and to provide insights into partnership formation and maintenance. The business survey was developed to compare the perceptions of the private sector with those of the public sector for factors contributing to the partnerships. A mailout survey design was chosen instead of a telephone survey because time and cost were critical factors in obtaining the data. (See Appendix A for samples of the two surveys.)

TARGET POPULATION

The target population for the education survey was high school vocational program directors and principals and occupational deans at the community college level. A business survey was directed towards businesses, industries, or agencies identified by the schools or colleges in the education survey as participating in partnerships.

PROCEDURES

All high schools in the state were mailed surveys addressed to the high school principal. In addition, surveys were mailed to vocational directors of the high schools and to the occupational deans of the community colleges. In the process, duplicates were received by some of the high schools. A school or college had the option of reporting one or several exemplary partnerships between their institution and various sectors of the community.

The first mailing of the education survey was followed three weeks later by telephone calls to the schools and colleges. Contacts were encouraged to complete the survey and mail it if they had not already done so. If the school or college vocational contact indicated no partnerships in vocational education were presently in existence, an oral negative response was noted. In some cases, a partnership was identified, but the respondent expressed a desire to complete the survey orally. In those instances, either a telephone survey or a personal interview was scheduled to obtain the needed data. If a survey was lost or misplaced, a new survey was mailed to the school or college contact.

Of the 154 original education surveys mailed, 60 unduplicated partnerships were reported. Twenty-one surveys were returned that indicated the schools had no partnerships. Twelve schools indicated through phone contact that no partnerships existed. The total response for the education survey both negative and positive was 93 or 63 percent.

As education surveys were returned, industry contacts were identified for each reported partnership; then the business survey was mailed. Of the sixty partnerships identified by vocational educators, twenty-two business/industry/agency partners responded to the business survey.

CHAPTER 5

FINDINGS

The process for understanding and interpreting the information collected for each of the sixty partnerships was as follows: as the education surveys were returned, responses for each question were read and compared to the responses for that same question in the other surveys. Patterns of answers emerged and categories of responses were identified. These categories were then screened for their appropriateness in a second reading. At that time, responses were assigned to categories. Through the process of continued readings, new categories emerged and others were eliminated until the responses fit a logical categorical pattern.

The categories were then tabulated for frequencies of responses. The results for all sixty education surveys appear here in table and summary form. For many of the survey questions, it was possible for respondents to indicate more than one answer and for others not to respond at all. Thus, a difference will be found in the numbers of responses among some questions.

Responses for individual questions on the business survey were light. Comparisons between the business survey and the education survey were therefore made in only one instance; for question number nine.

The first question of the education survey asked respondents to describe the school/college vocational education partnership with business/industry or agencies. These responses provided the partnership purpose and the organizational structure of the partnership. Please refer to Table I, below.

TABLE I QUESTION 1: PARTNERSHIP PURPOSE

PARTNERSHIP PURPOSE	FREQUENCY AND PERCENT OF RESPONSES					
	<u>COMMUNITY COLLEGE</u>		<u>HIGH SCHOOL</u>		<u>TOTAL</u>	
	FREQ	%	FREQ	%	FREQ	%
CURRICULUM/PROGRAM REVITALIZATION	4	14	8	19	12	17
COOP/WORK EXPERIENCE	3	10	14	33	17	24
NEW PROGRAM/INDUSTRY TRAINING	15	52	3	7	18	25
PROGRAM SUPPORT SERVICES	7	24	17	40	24	34
TOTAL	29	100	42	99	71	100

As may be noted, fifty-two percent of the responses indicated community colleges formed partnerships to provide training for industry. This information tends to support the community college mission as stated in the survey responses: to provide economic development and community service by virtue of the partnership arrangement.

On the other hand, the purpose of the high school partnership programs tended to weigh towards the broadening of program options, (forty percent of the partnerships reported by high schools contributed to program support), and towards occupational exploration (thirty-three percent of the purposes reported by high schools were for vocational co-op or work experience.

As shown in Table II, forty-six percent of the high schools and thirty-eight percent of the community colleges reported their traditional vocational advisory committees served as the organizational vehicle for a partnership. On the surface it may appear a dichotomy exists: the vocational advisory committees were intended to serve only an advisory function. Yet in fully collaborative arrangements, business and industry would not just advise and assist vocational educators, they would join in providing education and training. It appears that in some instances the advisory committee may function in a partnership fashion in that the members of the community share in "authority for what is done," and are "held equally responsible for the outcomes" (Moss, 1984, p. 71).

The use of formal organizations (those organizations with officers and by-laws designed specifically to facilitate partnerships) was reported less often than informal structures. Programs were designated as having informal structures when arrangements were between two parties (e.g. the educational institution and one other organization) and no formal organizational structure existed to support it. In many of the informal structures, a faculty or staff member merely sat down with the potential partner and negotiated an agreement which could be finalized by a contract or an informal arrangement.

In several instances, a community organization was used as the organizational structure. Examples found in the models provided in chapter three include the Chamber of Commerce, Job Training Partnership Act, and Rotary Club, to name but a few. As may be noted in Table II, a total of sixty-one responses were tabulated for this part of the question. Two of the responses indicated a dual structure.

TABLE II QUESTION 1: ORGANIZATIONAL STRUCTURE

ORGANIZATIONAL STRUCTURE	FREQUENCY AND PERCENT OF RESPONSES					
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL	
	FREQ	%	FREQ	%	FREQ	%
ADVISORY COMMITTEE	10	38	16	46	26	43
INFORMAL	11	42	9	26	20	33
FORMAL	2	8	3	9	5	8
COMMUNITY ORGANIZATIONS	3	12	7	20	10	16
TOTAL	26	100	35	101	61	100

Of the sixty partnerships reported, fifty-nine responses were tabulated for the question, "Did the partnership originate at the school personnel or community level?" The responses are presented in Table III. Of the community colleges reporting collaborative efforts, the greatest number (forty-four percent) originated as a joint education, business, or agency project. A majority (seventy-four percent) of the high schools indicated that their partnerships were started by school personnel.

TABLE III QUESTION 2: ORIGIN OF THE PARTNERSHIP

ORIGIN OF PARTNERSHIP	FREQUENCY AND PERCENT OF RESPONSES					
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL	
	FREQ	%	FREQ	%	FREQ	%
SCHOOL PERSONNEL	6	24	25	74	31	53
BUSINESS/INDUSTRY/AGENCY	8	32	5	15	13	22
JOINT SCHOOL/BUSINESS	11	44	4	12	15	25
TOTAL	25	100	34	101	59	100

When asked to explain how issues to be addressed by the partnership were identified, respondents answered that issues either: 1) originated with a school problem and external resources were sought to address the problem; 2) originated when the business, industry, or agency approached the school to seek assistance for a perceived education or training need; or 3) were identified through mutual collaborative discussions, taking into consideration the needs of both the community organization and the school or college. The frequency and percent of responses on issues are shown in Table IV.

As might well have been expected in a partnership arrangement, a majority (fifty percent of the combined total) of the community college and high school issues were identified jointly.

As a majority of the high school partnerships originated with school personnel, it appears the issues or reasons for the partnership were identified at that time. This accounts for the forty-four percent of that group that responded that the issues were identified by the school.

TABLE IV QUESTION 3: ISSUES OF THE PARTNERSHIPS

ISSUES	FREQUENCY AND PERCENT OF RESPONSES					
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL	
	FREQ	%	FREQ	%	FREQ	%
SCHOOL	3	13	15	44	18	31
BUSINESS	8	33	3	9	11	19
BOTH	13	54	16	47	29	50
TOTAL	24	100	34	100	58	100

Table V presents the factors of success in partnership formation: what worked. Most of the respondents (fifty-five percent of the combined community college and high school total) felt that having an established rapport and communication with businesses, industry, or agencies worked for them when they attempted to initiate the partnership. Providing mutual benefits or reciprocal features for the partnership were also listed as factors that worked. The high schools put most weight on the communication factor, while community colleges put greatest importance on establishing reciprocal features.

Also mentioned, but less often as factors that worked in obtaining support were: 1) establishing clear goals for the partnership; 2) selecting the "right" people for involvement; and 3) using program success as a means of selling the partnership idea.

The responses of the nineteen percent of partnerships, which were started at the community level, were not relevant to this question, as it dealt with school situations.

TABLE V QUESTION 6: OBTAINING SUPPORT--WHAT WORKED

WHAT WORKED	FREQUENCY AND PERCENT OF RESPONSES					
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL	
	FREQ	%	FREQ	%	FREQ	%
COMMUNITY RAPPORT	11	44	24	62	35	55
CLEAR GOALS	1	4	3	8	4	6
RECIPROCAL	9	36	7	18	16	25
RIGHT PEOPLE	3	12	1	3	4	6
PROGRAM SUCCESS	1	4	4	10	5	8
TOTAL	25	100	39	101	64	100

Only twenty-seven responses were recorded by educators for the question, What didn't work? (in obtaining support for the partnership). This in itself seems to indicate a satisfaction by educators with their partnerships. Of the problems encountered, ineffective communications were most often mentioned.

Those indicating "poor solicitation" did not work, gave examples that may be helpful. The responses are presented in Table VI. "Cold calls" to business--without prior written or telephone notice--was deemed ineffective. Some suggested the initial contact to a business or agency should be by an individual of equal or the same authority level as the business or agency person being contacted.

A few business people listed, on the industry survey, some factors which they felt were not positive aspects to solicitation. A summary of those comments include: meetings that were too long, meetings held too frequently, or meetings that were poorly scheduled for place and time. A few business persons suggested that uninvolved members of a group contributed to disinterest in the group.

TABLE VI QUESTION 6: OBTAINING SUPPORT--WHAT DIDN'T WORK

WHAT DIDN'T WORK	FREQUENCY AND PERCENT OF RESPONSES					
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL	
	FREQ	%	FREQ	%	FREQ	%
SCHEDULING	0	—	2	9	2	7
INEFFECTIVE SOLICITATION	0	—	7	32	7	26
WRONG PEOPLE	2	40	3	14	5	19
INEFFECTIVE COMMUNICATION	1	20	7	32	8	30
INEFFECTIVE GOALS	2	40	3	14	5	19
TOTAL	5	100	22	101	27	101

In response to the question, "How did you assure that everyone understood their role in this partnership?" many reported that the types of preagreements used assisted in establishing partnership roles. Preagreements were either informal agreements, or formal agreements, which might have included by-laws, a constitution, or a formal contract. Some had no established preagreements at all. This latter group established roles through continuous communications as an on-going process of the partnership. As shown in Table VII, the greatest number of the respondents indicated that roles were established through informal preagreements and understandings.

TABLE VII QUESTION 7: ESTABLISHING ROLES

ROLE ESTABLISHMENT	FREQUENCY AND PERCENT OF RESPONSES					
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL	
	FREQ	%	FREQ	%	FREQ	%
INFORMAL PREAGREEMENT	12	55	17	45	29	48
FORMAL PREAGREEMENT	2	9	10	26	12	20
ON-GOING COMMUNICATION/ REASSESSMENT	8	36	11	29	19	32
TOTAL	22	100	38	100	60	100

Individuals reporting partnerships said five factors were used to maintain the partnership: 1) the program was successful and this caused interest to be high ("success breeds success"); 2) the partners shared equally in the responsibilities, activities, and outcomes; 3) the reciprocal features of the program provided benefits for everyone; 4) the college or school appeared willing to listen and responded to ideas and concerns of the business or agency; and 5) the communication flow was adequate and provided feedback and reinforcement which resulted in the continued interest of the group. Of all these factors, the adequacy of communication flow was most often mentioned as a factor that contributed to the maintenance of the partnership. These results are presented in Table VIII.

TABLE VIII QUESTION 8: GROUP MAINTENANCE

GROUP MAINTENANCE	FREQUENCY AND PERCENT OF RESPONSES					
	<u>COMMUNITY COLLEGE</u>		<u>HIGH SCHOOL</u>		<u>TOTAL</u>	
	FREQ	%	FREQ	%	FREQ	%
VISIBLE PROGRESS	3	11	7	24	10	18
JOINT RESPONSIBILITY	3	11	7	24	10	18
RECIPROCAL FEATURES	8	30	2	7	10	18
EXTERNALLY ORIGINATED IDEAS	2	7	4	14	6	11
COMMUNICATION FLOW	11	41	9	31	20	36
TOTAL	27	100	29	100	56	101

In describing the benefits for teachers resulting from their partnership experience, both the community college and business respondents most often referred to the professional upgrading of knowledge and skills. The results are contained in Table IX. High school administrators mentioned most often that instructional support (demonstrations, tours, etc.) or program support were benefits for teachers. Personal and professional exposure and credibility were also indicated by the high school group as being a side benefit to partnership involvement for teachers.

TABLE IX QUESTION 9: BENEFITS FOR TEACHERS

TEACHER BENEFITS	FREQUENCY AND PERCENT OF RESPONSES							
	<u>COMMUNITY COLLEGE</u>		<u>HIGH SCHOOL</u>		<u>TOTAL</u>		<u>INDUSTRY</u>	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
INSTRUCTIONAL SUPPORT	6	18	10	20	16	19	4	22
PROGRAM SUPPORT	4	12	12	24	16	19	4	22
PROFESSIONAL UPGRADING	13	38	8	16	21	25	6	33
OTHER	2	6	2	4	4	5	0	...
PERSONAL/PROFESSIONAL CREDIBILITY/EXPOSURE	5	15	12	24	17	20	3	17
PLACEMENT STATIONS FOR STUDENTS	4	12	7	14	11	13	1	6
TOTAL	34	101	51	102	85	100	18	100

The respondents, when asked to note the benefits derived by students from partnerships, overwhelmingly mentioned exposure to realistic/current skills, equipment, and knowledge as a benefit. Please refer to Table X. Tangible benefits listed as being a benefit for students were; jobs, scholarships, grants, loans, and supplies at a discount.

Nineteen percent of the community college respondents listed the importance of educational advancement as a student benefit. As most of the community college partnerships were for the purpose of training for and with industry, it would be logical to assume the employees were involved in professional upgrading for purposes of advancement with the company.

TABLE X QUESTION 9: BENEFITS FOR STUDENTS

STUDENT BENEFITS	FREQUENCY AND PERCENT OF RESPONSES							
	<u>COMMUNITY COLLEGE</u>		<u>HIGH SCHOOL</u>		<u>TOTAL</u>		<u>INDUSTRY</u>	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
EXPOSURE TO INDUSTRY MODELS/ CAREER CONTACTS	5	19	6	12	11	14	6	30
TANGIBLE BENEFITS	5	19	8	16	13	17	2	10
POSITIVE ATTITUDES	0	--	5	10	5	6	0	--
EXPOSURE TO SKILLS/KNOWLEDGE	12	44	29	57	41	53	12	60
EDUCATIONAL ADVANCEMENT	5	19	3	6	8	10	0	--
TOTAL	27	101	51	101	78	100	20	100

Table XI reveals that thirty-eight percent of business/industry/agency respondents indicated that having a source of interested, trained employees was of great benefit to them. The educators concurred, although the weight of the concurrence was disproportionate, as sixty percent of the community colleges responded with this factor and only thirty-two percent of the high school listed this as a benefit for businesses or agencies.

Eighteen percent of the high school respondents perceived that the business or agency had gained in public relations through partnership involvement. This factor was never mentioned by either the community college or the business/industry/agency respondents.

TABLE XI QUESTION 9: BENEFITS FOR BUSINESS/INDUSTRY/AGENCY

BUSINESS	FREQUENCY AND PERCENT OF RESPONSES							
	<u>COMMUNITY COLLEGE</u>		<u>HIGH SCHOOL</u>		<u>TOTAL</u>		<u>INDUSTRY</u>	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
UPGRADE/RETRAIN PERSONNEL	7	28	1	1	8	10	3	19
EXTENDED SALES CAPACITY	2	8	3	5	5	6	0	--
SOURCE OF TRAINED PERSONNEL	15	60	18	32	33	41	6	38
OTHER	1	4	6	11	7	9	2	13
DONATED PRODUCTS/SERVICES	0	--	8	14	8	10	2	13
PUBLIC RELATIONS	0	--	10	18	10	12	0	--
SELF SATISFACTION	0	--	10	18	10	12	3	19
TOTAL	25	100	56	99	81	100	16	102

Community college respondents listed community relations, donations of equipment or facilities, increased student interest, and expanded program offerings almost an equal number of times in their responses to, "What are the benefits of partnerships for the school or college?" While forty-three percent of high school respondents most often mentioned good community relations was a direct benefit of the partnership to their institutions. These results are presented below in Table XII.

TABLE XII QUESTION 9: BENEFIT TO THE COLLEGE/SCHOOL

SCHOOL COLLEGE	FREQUENCY AND PERCENT OF RESPONSES							
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL		INDUSTRY	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
GOOD COMMUNITY RELATIONS	8	24	16	43	24	34	2	15
DONATIONS	8	24	6	16	14	20	2	15
OTHER	2	5	4	11	6	8	0	--
INCREASED STUDENT INTEREST	7	21	2	5	9	13	5	38
EXPANDED PROGRAM OFFERINGS	9	26	9	24	18	25	4	31
TOTAL	34	100	37	99	71	100	13	99

When asked what kinds of administrative support were necessary to establish and maintain successful partnerships, the responses, shown in Table XIII, were divided into four categories: 1) resource allocation; 2) time commitment; 3) philosophical support; and 4) support of public relations efforts. A fifth category was established for statements of non-support. For example, one individual who indicated that some administrators were obstructing partnership development, summed it up this way: "If they can't help push, hopefully they won't stand in the road."

TABLE XIII QUESTION 10: NECESSITY OF ADMINISTRATIVE SUPPORT

ADMINISTRATIVE SUPPORT	FREQUENCY AND PERCENT OF RESPONSES					
	COMMUNITY COLLEGE		HIGH SCHOOL		TOTAL	
	FREQ	%	FREQ	%	FREQ	%
RESOURCE ALLOCATION	10	31	15	30	25	30
COMMIT OWN TIME	3	9	8	16	11	13
PHILOSOPHY	9	28	19	38	28	34
PUBLIC VISIBILITY/RELATIONS	6	19	3	6	9	11
OTHER INSTRUCTIONAL SUPPORT	4	13	5	10	9	11
TOTAL	32	100	50	100	82	99

Community college respondents agreed with their high school counterparts that resource allocation as well as philosophical support by their administrators were necessary for the success of partnerships. Comments made on the survey included: 1) school administrators should be willing to listen; 2) school administrators should provide school personnel release time for meetings at business or agency sites; 3) school administrators should be willing to update equipment and curriculum as suggested by business and industry; and 4) school administrators should be flexible in rules so vocational educators may be flexible in responding to changing conditions.

One individual expressed an opinion of others saying, "Administration must convey (to business) that we are interested, we listen, and their efforts are critical components of the training program."

Conclusion

This is descriptive research, and any conclusions are not definitive. However, while the nature of this study does not allow conclusions to be drawn, some valuable observations have been made. Following is a summary of the key points:

- * The information collected here provides a significant beginning for future research of partnership organizations in Arizona and elsewhere. No previous research or writings lent themselves to the establishment of the subcategories that arose from each question. The use of the identified subcategories in a closed questionnaire format could enhance further research about vocational education or other education partnerships.
- * A greater understanding of organizational structures used to facilitate partnerships has been realized. Assumptions may be made by the reader about the feasibility of a particular type of structure to a given community and how it might meet their organizational needs.
- * The importance of the teacher was only hinted at in the models cited in this report. In both rural and urban areas, dynamic teachers were described, who not only initiated partnerships, but were the sustaining factor for them.
- * Sufficient awareness, concern, and interest by administrators at all levels of management, in both education and business communities, appear to have impact for success of the partnerships.
- * The importance of role identification and clarification for participants in partnerships was reinforced. The significance of group maintenance procedures and adequate communication flow was expressed by many respondents.

The benefits of partnerships are many. The need for critical information, expertise, and resources, plus the potential for goodwill of all the parties of the collaborative effort, should not be underestimated.

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APPENDICES

APPENDIX A

SAMPLE SURVEY TO VOCATIONAL PROGRAM DIRECTORS

Dear Vocational Program Director:

We are asking for your assistance in identifying examples of community cooperation between businesses or agencies and vocational education. Outstanding examples of partnerships will be recognized in a future publication of the Arizona Center for Vocational Education and at the Annual State Vocational Education Conference in August.

The information we are seeking includes: the factors (incentives) that caused business, agencies, and other community entities to participate with vocational education; planning procedures utilized; processes developed by your vocational education department to maintain the relationship; and area resources tapped to achieve the objectives.

With information obtained from our study, we hope to develop guidelines which should assist schools in improving business/vocational education partnerships.

Please take time to answer the following questions. You may duplicate the survey in the event your school/campus may wish to provide data on more than one exemplary program.

Before you put this letter down, take a moment to answer the following question:

Do you have, or have you had, projects or activities which involve collaboration with business or community agencies?

_____ Yes
_____ No

If no, check the blank marked "No", refold the questionnaire with the self-addressed, stamped envelope side up and immediately place in the mail.

If yes, please take a few minutes to read and answer the following survey. Then refold with the self-addressed, stamped envelope side showing and mail this week.

Your cooperation in this endeavor will be greatly appreciated.

Sincerely,

Beth Packard, Project Director
Incentives to Business and Industry

COLLABORATIVE PROGRAMS AND ACTIVITIES BETWEEN VOCATIONAL EDUCATION AND BUSINESS AND AGENCIES

Program Title or Area: _____

Contact Person: _____

Title: _____

College/School: _____

Address: _____

Phone: _____

1. Please write a short description of your vocational education/business or community partnership. Is this partnership an on-going process for vocational education or is the thrust for a specific limited purpose, i.e. Vocational Education Week, committees that validate competencies, etc.

2. Did the idea for the partnership originate with school personnel or at the community level?

3. Explain how the issues to be addressed by the partnership were identified?

4. How were the community resources (human, financial, and physical) identified?

5. What planning steps were initiated prior to approaching the potential partner?

6. What worked for you in obtaining support of business, industry or agencies?

What didn't work?

7. How did you assure that everyone understood their role in this partnership?

8. What procedures were used to maintain the interest and the effort of the partnership group?

9. What benefits resulted from the collaboration with business and industry?

For the teacher?

For the student?

For industry?

For the school/college system?

10. In your opinion, what kinds of administrative support are necessary to establish and maintain successful partnerships?

It would be very helpful for us to gain the perspective of business people involved in your project. Would you provide us the names and phone numbers of business or agency contact persons with whom you worked closely?

Contact person: _____

Title: _____

Company or
agency name: _____

Address: _____

Phone: _____

Contact person: _____

Title: _____

Company or
agency name: _____

Address: _____

Phone: _____

If you wish to have a copy of the completed research results and guidelines for establishing a vocational education/business partnership, indicate by checking the appropriate line:

_____ Yes
_____ No

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APPENDIX A

SAMPLE SURVEY TO BUSINESS/INDUSTRY/AGENCY

Dear :

We are asking for your assistance in a study of vocational education cooperative efforts with business or other community agencies. Outstanding examples of partnerships will be recognized in a future publication of the Arizona Center for Vocational Education and at the Annual State Vocational Educational Education Conference in August.

The information we are seeking includes: the factors (incentives) that caused business or agencies to participate with vocational education; planning procedures utilized; processes developed by the vocational education department to maintain the business relationship; and community resources tapped to achieve the objectives.

With information obtained from our study, we hope to develop guidelines which should assist schools or businesses in improving business/vocational educational partnerships.

Please take a few minutes to read and answer the following questions about the school/business partnership from your perspective. Then place the survey in the self-addressed, stamped envelope and return it sometime this week.

Sincerely,

Beth Packard, Project Director
Incentives to Business and Industry

**VOCATIONAL EDUCATION/BUSINESS OR AGENCY
COLLABORATIVE PROGRAMS**

Name of company or
participating agency: _____

Contact person: _____

Title: _____

Address: _____

Phone: _____

Project description as provided by the school or college.

1. Explain how you determined what you wanted accomplished with your partnership.

2. How were the resources (human, financial, physical) identified?

3. What planning steps were taken?

4. What are the reasons for your participation with vocational education?

5. Did everyone understand their role?

6. What procedures to maintain the interest and the effort of everyone worked?

What didn't work?

7. In which of the following kinds of activities were you involved? Place an "X" in front of those items that apply.

- ☐ a. Served in an advisory capacity, e.g. for curriculum development, equipment purchases, etc.
- ☐ b. Participated in joint industry or agency/education training.
- ☐ c. Served as speakers, demonstrators, teaching resources to the school/campus.
- ☐ d. Provided tours, cooperative education, or job shadowing experiences.
- ☐ e. Provided summer jobs for students.
- ☐ f. Provided teacher training for vocational educators in your business/industry site.
- ☐ g. Provided access to equipment or facilities for training.
- ☐ h. Other (please describe). _____

8. From your perspective what benefits resulted from the collaboration between education and business or agencies?

For the teachers?

For the students?

For business or agencies?

For the school/college system?

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APPENDIX B

CONTACTS FOR TECHNICAL ASSISTANCE

American Association of Community and Junior Colleges
1 Dupont Circle, N.W., Suite 410
Washington, D.C. 20036
(202) 293-7050

American Association of School Administrators
1801 North Moore
Arlington, Virginia 22209
(703) 528-0700

American Vocational Association
2020 North 14th Street
Arlington, Virginia 22201
(703) 522-6121

Atlanta Partnership of Business & Education, Inc.
University Plaza
Urban Life Suite 736-739
Atlanta, Georgia 30303
(404) 658-2557
Contact: Dr. Boyd D. Odom, Executive Director, APBEI
Dr. Lowrie A. Fraser, Atlanta Public Schools Adopt-A-School

California Business Roundtable
P.O. Box 7643
San Francisco, California 94119-7643
(415) 974-5721

Center for Education and Work
(National Manpower Institute)
1211 Connecticut Avenue, N.W.
Washington, D.C. 20036

Chamber of Commerce of the United States
1615 H Street
Washington, D.C. 20062

Committee on Economic Development
1700 K Street, N.W.
Washington, D.C. 20006
(202) 296-5860

Conference Board
845 3rd Avenue
New York, New York 10022
(415) 974-5721

Education Commission of the States
1860 Lincoln Street
Suite 300
Denver, Colorado 80295
(303) 830-3620

Institute for Educational Leadership
1001 Connecticut Avenue, N.W.
Suite 310
Washington, D.C. 20036
(202) 822-8405

Junior Achievement, Inc.
550 Summer Street
Stanford, Connecticut 06901
(203) 359-2970

National Alliance of Business
1015 15th Street, N.W.
Washington, D.C. 20005
(202) 457-0040

National Association for the Exchange of Industrial Resources
540 Frontage Road
Northfield, Illinois 60093
(312) 446-9111

National Association for Industry-Education Cooperation
235 Hendricks Boulevard
Buffalo, New York 14226

National Center for Research in Vocational Education
Ohio University
1960 Kennedy Road
Columbus, Ohio 43210

National Education Association
1201 16th Street, N.W.
Washington, D.C. 20036
(202) 822-7350

National Institute for Work and Learning
1302 18th Street, N.W.
Suite 501
Washington, D.C. 20036
(202) 887-6800

National School Boards Association
1055 Thomas Jefferson Street, N.W.
Suite 600
Washington, D.C. 20007

National School Volunteer Program, Inc.
701 North Fairfax Street, Suite 320
Alexandria, Virginia 22314
(703) 836-4880

National Society for Internship and Experiential Education
122 Saint Mary's Street, 2nd Floor
Raleigh, North Carolina 27605
(919) 834-7536

Private Sector Initiatives
Partnerships in Education
The White House, Room 134
Washington, D.C. 20500
(202) 456-6676

APPENDIX C

OTHER ARIZONA PARTNERSHIPS HIGHLIGHTED

ARIZONA BUSINESS, INDUSTRY, EDUCATION COUNCIL

Janet Beauchamp, Executive Director
4350 East Camelback Road, Suite 140C
Phoenix, Arizona 85018

Arizona Business, Industry, Education Council is a collaborative of leaders from business, education, industry, and agencies. The stated objectives of ABIEC are: 1) to increase the understanding and appreciation among students, parents, and educators of the career opportunities in business and industry and the Free Enterprise System, 2) to seek an active commitment from business, industry, and educational leaders in preparing students for the world of work and make human and physical resources available to students, teachers, and counselors, and 3) to serve as a liaison between the educational and business/industry communities and to increase cooperation and understanding between various civic, service, labor, legislative, and professional organizations.

JUNIOR ACHIEVEMENT

Kristy Eich, Program Manager
3508 North 7th Street
Phoenix, Arizona 85014

Practical economic and business education is taught through Junior Achievement, an after school add-on-program. Volunteers from business assist the instructor as students develop their own corporation, issue stock, produce, and market a product, and deal with inherent direct and indirect costs.

Junior Achievement is the world's oldest privately-funded economic and business education group, founded in 1919. Teamwork between business and education through economic education offerings is the goal of the national organization.

INDUSTRY TRAINING SERVICES

Arizona Department of Education
1535 West Jefferson
Phoenix, Arizona 85007

The Industry Training Services program is state funded and administered by the Arizona Department of Education, Division of Vocational Education. Funded projects throughout the state give training assistance to new and expanding industries for three stated purposes: 1) to encourage new industries to locate in Arizona and to encourage existing industries to expand their Arizona operations, 2) to offer to the people of Arizona the specific training needed to qualify for and perform in jobs created by new or expanding industries, 3) to help new or expanding industry create a productive work force as expeditiously and efficiently as possible.

ADOPT-A-SCHOOL

Adopt-a-School has no national organizational structure but has spread as an idea throughout the nation. Adopt-a-School programs may be found in several Arizona schools. While not limited to the support of vocational education, the program is inclusive of it. Program principles are established and adhered to between participating partners and include a long list of possible activities in which the businesses may choose to volunteer time and expertise.

RIO SALADO COMMUNITY COLLEGE

Dr. Joyce Elsner, Dean of Instruction
135 North Second Avenue
Phoenix, Arizona 85003
(602) 256-7722

Rio Salado Community College, one of the colleges within the Maricopa Community College system, is a college "without walls." Programs are designed for and with the community. The college has no training facilities of their own, so rely upon in-house training. The concept provides the ultimate opportunity for resource sharing in terms of equipment, facilities, and personnel.

PARTNERSHIP FOR EXCELLENCE

J. Timothy Waters, Assistant Superintendent
Glendale Union High School District
7650 North 43rd Avenue
Glendale, Arizona 85301

Partnership for Excellence is a business, industry, education alliance formed in August, 1983. A non-profit, tax-exempt foundation, the partnership was created to support the alliance's stated purpose which is to "increase the quality and productivity of Arizona elementary, high school, college, and university graduates."

PHOENIX UNION HIGH SCHOOL DISTRICT

Dr. John Baracy, Deputy Executive for Administration
2526 West Osborn Road
Phoenix, Arizona 85017
251-3940

Phoenix Union High School District has developed a three tiered approach to the vocational advisory committee structure. Workers are utilized to identify job tasks. Small business persons provide the impetus for program support, while large corporations serve in an oversight and policy capacity.

EAST VALLEY VOCATIONAL EDUCATION ALLIANCE

Dr. Robert Jones, Director of Vocational/Technical Education
Mesa Public Schools
549 North Stapley Drive
Mesa, Arizona 85203
898-7700

Mr. Kenneth M. Schultz, Associate Dean of Instruction and Occupational Technical Education
Mesa Community College
1833 West Southern
Mesa, Arizona 85202
833-1261

An alliance of business and educational organizations in the region of Mesa, Arizona has provided vocational education training options to both postsecondary and secondary vocational education students. An intergovernmental agreement provides the Mesa Public Schools with equipment and facility use at Mesa Community College. In exchange the community college places adult students in public schools vocational programs on a space available basis.

APPENDIX D

PRACTICAL GUIDES TO COLLABORATION

PRO EDUCATION

500 Park Street North
St. Petersburg, Florida 33709
(813) 546-8440

Pro Education, a new publication, is a magazine about partnerships with education. Memberships and affiliations include: 1) the Educational Press Association of America, 2) the National Education Association, 3) the National Association for Industry-Education Cooperation, 4) the National School Volunteer Program, and 5) the National Community Education Association.

SHARING RESOURCES: POSTSECONDARY EDUCATION AND INDUSTRY COOPERATION

The National Center for Research in Vocational Education
Ohio State University
1960 Kenney Road
Columbus, Ohio 43210

Summaries of 219 exemplary partnership programs and practices were collected in a national survey of community colleges in 1981. Complete descriptions of 49 of the programs are highlighted. Contributions of both industry and education are included.

IMPROVING STUDENT PERFORMANCE IN CALIFORNIA: A Catalog of Business and Community Programs in Support of Local Education

California Roundtable
P.O. Box 7643
San Francisco, California 94119-7643

The notebook style catalog contains program abstracts of more than 600 business and community programs in support of education.

LINKER'S TOOL KIT: Set of six documents

American Association for Vocational Instructional Materials
The National Institute for Instructional Materials
120 Driftmier Engineering Center
Athens, Georgia 30602

The Linker's Tool Kit is "a set of six documents developed to assist vocational-technical administrators and others to establish functional linkages with business, industry, labor, government, and the military (BIL/GM)...", 1984, p.1).

APPENDIX E
INDUSTRY ACTIVITIES

Of twenty-two industry questionnaires returned by businesses, industries, and agencies, the following responses are noted to the question, "In which of the following activities were you involved?"

Frequency Activity

- | | |
|----|---|
| 14 | a. Served in an advisory capacity, e.g. for curriculum development, equipment purchases, etc. |
| 9 | b. Participated in joint industry or agency/education training. |
| 13 | c. Served as speakers, demonstrators, teaching resources to the school/campus. |
| 10 | d. Provided tours, cooperative education, or job shadowing experiences. |
| 8 | e. Provided summer jobs for students. |
| 3 | f. Provided teacher training for vocational educators in your business/industry site. |
| 11 | g. Provided access to equipment or facilities for training. |
| 5 | h. Other |